



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,977	09/26/2001	Robert Fleck	GR 99 P 3187	1533

7590

10/08/2003

LERNER AND GREENBERG, P.A.  
PATENT ATTORNEYS AND ATTORNEYS AT LAW  
Post Office Box 2480  
Hollywood, FL 33022-2480

EXAMINER
----------

WILLS, MONIQUE M

ART UNIT	PAPER NUMBER
----------	--------------

1746

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/963,977

Applicant(s)

FLECK ET AL.

Examiner

Wills M Monique

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "CrFe5Y<sub>2</sub>O<sub>3</sub>1" is an improper chemical formula. Appropriate correction is required.

### ***Priority***

German foreign priority document(s) 199 13 959.8, filed March 26, 1999 and submitted under 35 U.S.C. 119(a)-(d), has/have been received and placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statement(s) filed 9/26/01 has/have been received and complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 & 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Quadakkers WO/009723006.

Quadakkers teaches a high temperature fuel cell comprising a bipolar plate coated with an iron material (abstract). The iron oxide layer is in the region of the gas guiding surfaces or fuel-gas chambers (3) of bipolar plate (abstract). The iron is inherently an oxidation buffer. All high temperature fuel cells inherently contain electrolyte/electrode units having an anode. Therefore, the intent claims are anticipated by Quadakkers.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1746

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 & 4 are rejected under 35 U.S.C. 102(e) as being anticipated by May  
U.S. Pub. 2001/0021470.

May teaches a fuel cell comprising a proton-exchange membrane interposed between an anode and cathode to form an electrolyte/electrode unit (par. 23). The fuel cell also contains a bipolar plate (par. 24) comprising fluid flow channels (par. 33) with an iron coating over the entire surface (par. 52). The iron coating inherently provides an oxidation buffer. Therefore, the instant claims are anticipated by May.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 1746

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Molter U.S. Pub. 2001/0049044.

Molter teaches a fuel cell stack comprising anode and cathode disposed on opposite sides of an electrolyte membrane, a bipolar plate disposed adjacent to the anode (par. 12). The bipolar plate comprises a plurality of metal foil sheets with fluid-flow passages (par. 17). The metal foil is made of iron or iron superalloys (par. 18) that inherently provides an oxidation buffer in the fuel-gas chamber. The bipolar plate can also included an electrode support comprising a porous (par. 25) iron (par. 26) wire netting or expanded metal screen (par. 25). Therefore, the instant claims are anticipated by Molter.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Quakdackers et al. U.S. Patent 5,733,682 in view of Quadackers WO/9723006.

Art Unit: 1746

Quadakkers et al. U.S. Patent 5,733,682 teaches a metal bipolar plate formed of  $\text{CrFe}_5\text{Y}_2\text{O}_3$  (col. 2, lines 1-6). The flow passages (4) of the bipolar plate are adjacent an anode/cathode/electrolyte unit (Fig. 1 & 3).

Quadakkers et al. U.S. Patent 5,733,682 is silent to an oxidation buffer containing iron on the bipolar plate.

Quadakkers WO/9723006 teaches coating a bipolar plate with iron in the vicinity of its gas guiding surfaces to improve conductivity and increase corrosion resistance.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the iron material of Quadakkers WO/9723006 on the bipolar plate of Quadakkers et al. U.S. Patent 5,733,682 in order to improve conductivity and increase corrosion resistance.

### ***Conclusions***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (703) 305-0073. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

Art Unit: 1746

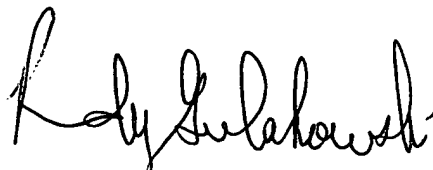
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Randy Gulakowski, may be reached at 703-308-4333.

The unofficial fax number is (703) 305-3599. The Official fax number for non-final amendments is 703-872-9310. The Official fax number for after final amendments is 703-872-9311.

Mw

09/25/03



RANDY GULAKOWSKI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700